

ASX ANNOUNCEMENT

16 SEPTEMBER 2024

## AVL ELECTROLYTE SUCCESSFULLY DEPLOYED IN VANADIUM FLOW BATTERY FOR HORIZON POWER

### KEY POINTS

- Factory acceptance testing of vanadium flow battery now completed for Horizon Power's long duration energy storage pilot.
- First successful utilisation of a vanadium flow battery containing vanadium electrolyte manufactured by Australian Vanadium Limited in Western Australia.
- Leading battery manufacturer Invinity Energy Systems confirms AVL electrolyte meets its stringent quality specifications for use in this battery.
- VFB being transported to Horizon Power's site in Kununurra, Western Australia for installation and site acceptance testing.

Australian Vanadium Limited (ASX: AVL, the Company or AVL) is pleased to announce the successful completion of factory acceptance testing (FAT) of a vanadium flow battery (VFB) to be installed at a Horizon Power site in Kununurra, Western Australia.

The 220kWh VFB, which can deliver up to 78kW of power, was purchased by Horizon Power for a long duration energy storage project.<sup>1</sup> The battery contains vanadium electrolyte manufactured by AVL at the Company's electrolyte manufacturing facility in Perth.<sup>2</sup> This marks the first instance of AVL's vanadium electrolyte being used in an operational VFB and the first instance of AVL's electrolyte being approved for use by a leading VFB manufacturer, Invinity Energy Systems, meeting stringent quality standards.

AVL's Chief Executive Officer, Graham Arvidson comments, *"We are pleased to report that the VFB purchased by Horizon Power has now completed the FAT process and is operating successfully. Over the past months the Company's wholly owned subsidiary, VSUN Energy, has collaborated closely with Horizon Power to successfully integrate its preferred hardware with the battery. This is also a significant milestone for AVL, as it marks the first use of vanadium electrolyte produced at our Perth facility in a functioning battery. This is a true testament to our vertical integration strategy, with the ultimate goal of using vanadium oxides processed from the Australian Vanadium Project in our vanadium electrolyte. We are particularly pleased that leading VFB manufacturer Invinity has*

<sup>1</sup> See ASX announcement dated 28 July 2023 'Horizon Power to Purchase VFB for Long Duration Energy Storage Pilot'

<sup>2</sup> See ASX announcement dated 19 March 2024 'Battery Ready Vanadium Electrolyte Produced'

*approved our electrolyte for use in the battery and confirmed that our electrolyte meets its stringent standards. We look forward to the successful commissioning and operation of the battery as part of Horizon's project in regional Western Australia."*

With the completion of FAT, the VSUN Energy team welcomed staff from Horizon Power to view the battery and learn about its potential to address the significant demand for long duration energy storage, which provides support to electricity grids increasingly powered by variable renewable energy such as solar and wind.



**Figure 1 - Horizon Power and VSUN Energy staff post FAT completion**

Horizon Power is Western Australia's regional energy provider. The use of long duration energy storage, in the form of VFBs, could assist Horizon Power to accelerate the decarbonisation of its 140 energy networks spread throughout a service area covering 2.3 million square kilometres.

The VFB was supplied by leading global manufacturer Invinity Energy Systems plc (AIM: IES). The battery is now being transported to Horizon Power's site in Kununurra, where it will be installed and undertake site acceptance testing.

For further information, please contact:

**Graham Arvidson, CEO**

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*This announcement has been approved in accordance with the Company's published continuous disclosure policy and has been approved by the Board.*

## ABOUT AUSTRALIAN VANADIUM LTD

AVL is a resource company focused on vanadium, seeking to offer investors a unique exposure to all aspects of the vanadium value chain – from resource through to steel and energy storage opportunities. AVL is advancing the development of its world-class Australian Vanadium Project at Gabanintha. The Australian Vanadium Project is one of the most advanced vanadium projects being developed globally, with 395.4Mt at 0.77% vanadium pentoxide ( $V_2O_5$ ), containing a high-grade zone of 173.2Mt at 1.09%  $V_2O_5$ , reported in compliance with the JORC Code 2012 (see ASX announcement dated 7 May 2024 ‘39% Increase in High Grade Measured and Indicated Mineral Resource’).

VSUN Energy is AVL’s 100% owned renewable energy and energy storage subsidiary which is focused on developing the Australian market for vanadium flow batteries for long duration energy storage. VSUN Energy was set up in 2016 and is widely respected for its VFB expertise. AVL’s vertical integration strategy incorporates processing vanadium to high purity, manufacturing vanadium electrolyte and working with VSUN Energy as it develops projects based on renewable energy generation and VFB energy storage.

## MINERAL RESOURCE ESTIMATE

The Australian Vanadium Project – Mineral Resource estimate by domain and resource classification using a nominal 0.4%  $V_2O_5$  wireframed cut-off for low-grade and nominal 0.7%  $V_2O_5$  wireframed cut-off for high-grade (total numbers may not add up due to rounding).

Zone	Category	Mt	$V_2O_5$ %	Fe %	$TiO_2$ %	$SiO_2$ %	$Al_2O_3$ %
HG	Measured	30.6	1.14	46.3	12.9	7.4	6.2
	Indicated	74.8	1.11	47.5	12.6	7.0	5.7
	Inferred	67.9	1.06	45.3	12.1	9.0	6.6
	<b>Subtotal</b>	<b>173.2</b>	<b>1.09</b>	<b>46.5</b>	<b>12.5</b>	<b>7.8</b>	<b>6.1</b>
LG	Indicated	61.8	0.55	26.1	7.1	26.6	16.3
	Inferred	142.5	0.48	24.9	6.6	28.9	15.2
	<b>Subtotal</b>	<b>204.3</b>	<b>0.50</b>	<b>25.3</b>	<b>6.8</b>	<b>28.2</b>	<b>15.5</b>
Transported	Inferred	17.9	0.65	31.0	7.3	24.1	14.4
	<b>Subtotal</b>	<b>17.9</b>	<b>0.65</b>	<b>31.0</b>	<b>7.3</b>	<b>24.1</b>	<b>14.4</b>
Total	Measured	30.6	1.13	46.3	12.9	7.4	6.2
	Indicated	136.6	0.85	37.8	10.1	15.8	10.5
	Inferred	228.2	0.66	31.4	8.3	22.6	12.6
	<b>Subtotal</b>	<b>395.4</b>	<b>0.77</b>	<b>34.8</b>	<b>9.3</b>	<b>19.1</b>	<b>11.4</b>

Note: Totals may not add up due to rounding

## ASX CHAPTER 5 COMPLIANCE AND CAUTIONARY AND FORWARD-LOOKING STATEMENTS

### ASX Listing Rule 5.23

The information in this announcement relating to mineral resource estimates for the Australian Vanadium Project is extracted from the announcement entitled '39% Increase in High Grade Measured and Indicated Mineral Resource' released to the ASX on 7 May 2024 which is available on the Company's website [www.avl.au](http://www.avl.au).

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement, and that all material assumptions and technical parameters underpinning the estimates in the original market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the competent person's findings are presented have not been materially modified from the original market announcement.

### Forward-Looking Statements

This release may contain certain forward-looking statements with respect to matters including but not limited to the financial condition, results of operations and business of AVL and certain of the plans and objectives of AVL with respect to these items.

These forward-looking statements are not historical facts but rather are based on AVL's current expectations, estimates and projections about the industry in which AVL operates and its beliefs and assumptions.

Words such as "anticipates," "considers," "expects," "intends," "plans," "believes," "seeks," "estimates", "guidance" and similar expressions are intended to identify forward looking statements and should be considered an at-risk statement. Such statements are subject to certain risks and uncertainties, particularly those risks or uncertainties inherent in the industry in which AVL operates.

These statements are not guarantees of future performance and are subject to known and unknown risks, uncertainties, and other factors, some of which are beyond the control of AVL, are difficult to predict and could cause actual results to differ materially from those expressed or forecasted in the forward-looking statements. Such risks include, but are not limited to resource risk, metal price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks in the countries and states in which we sell our product to, and government regulation and judicial outcomes. For more detailed discussion of such risks and other factors, see the Company's Annual Reports, as well as the Company's other filings.

AVL cautions shareholders and prospective shareholders not to place undue reliance on these forward-looking statements, which reflect the view of AVL only as of the date of this release.

The forward-looking statements made in this announcement relate only to events as of the date on which the statements are made.

AVL will not undertake any obligation to release publicly any revisions or updates to these forward-looking statements to reflect events, circumstances or unanticipated events occurring after the date of this announcement except as required by law or by any appropriate regulatory authority.